

FACTORS PROMOTING INFORMATION  
USAGE IN EFFECTIVE CURRICULUM  
DECISION-MAKING

By

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STATEMENT OF ORIGINALITY

This dissertation does not contain any material which has been accepted for the award of any other higher degree or graduate diploma in any tertiary institution. Further, to the best of my knowledge and belief, this dissertation does not contain any material previously published or written by another person, except where due reference is made in the text.

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## ABSTRACT

Educational institutions invest greatly in the management of information. Apparently, they accept an underlying assumption that a relationship exists between information use and effective decision-making. The aim of the present study was to identify factors which promoted information usage (information acquisition, processing or dissemination) for effective curriculum decision-making.

The rationale for the study derived from the operation of library and information services for Curriculum Services personnel within the Education Department of Tasmania. Curriculum personnel considered that the existing services had no impact on the quality of decisions made and there was evidence of great diversity of information use in curriculum decision-making. The study addressed three main questions: What are the information sources selected by middle management curriculum personnel to meet specific information needs? Is information usage related to individual or organisational characteristics, such as position held, length of experience or organisational climate? A related question concerned the extent to which "open" or "closed" work environments enhanced information use. What factors, such as library-based resource and information services tend to enhance or obstruct information usage in effective curriculum decision-making?

The methodological approach was one of exploratory research. It was based on descriptive analysis via a questionnaire survey, an interview schedule and a comparative review of organisational documentation. A small and

well-defined sample of middle management officers were surveyed. They were personnel in the Education Department of Tasmania's Curriculum Services Section of both the Division of Educational Programs and TAFE. Twelve of the thirty questionnaire respondents were interviewed. Those interviewed provided recent examples or case studies of their own or the organisational documentation.

The most frequently mentioned information sources were obtained through interpersonal communications with colleagues and ideas resulting from discussion. Individual characteristics such as position held and length of experience, were insignificant factors in enhancing information use. Open work environments incorporating high levels of professional autonomy positively enhanced information use. Closed organisational climates inhibited information dissemination. Access to library and information services did not meet specific needs for information use in effective curriculum decision-making. Much of the information that was sought was treated in a surveillance rather than a decision mode.

Two key factors appear to contribute to the effectiveness of curriculum decision-making. One is the value placed on the process of decision-making itself. Two is the factor of interpersonal communication and negotiation as part of that process.

The study recommends a basic shift in the conception of library and information services. This means altering these services from mere access to information sources towards the provision of the information, specifically meeting the identified needs of the individual personnel.

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## CHAPTER 1: INTRODUCTION

### 1.1 THE PROBLEM

In a growing atmosphere of educational accountability and fear of declining educational standards, educational administrators are required to explain and justify their policy and decision-making. To this end, educational institutions invest greatly in the management of information. Apparently, they accept the underlying assumption that a relationship exists between information usage and effective decision-making. However, in their efforts to improve policy and decision-making, administrators appear to have few guidelines for the effective usage of information.

In an age of 'information explosion', the ways in which decision-makers use the information services at their disposal have made a significant impact on the planning of information systems. This is evident especially in the computer-based information retrieval industry. Such developments in the private business sector do not appear yet to have crystallised within the area of public administration, specifically in educational decision-making.

The exact nature of this relationship between information usage and effective decision-making is not clear. Information usage at the upper level of educational policy-making for senior management has been monitored recently in Australia. It was highlighted during the policy reviews of the government and public administration sectors. In Tasmania, for example, both the Cartland (1981) and Hughes (1982) Reports resulted in the establishment of "policy processing" and "executive support

units". Their aim was to provide an information system to support policy-making and decision-making in senior management for departmental heads and directorates.

A broad question which became the subject of the present study was this: how could information be acquired, processed and disseminated such that effectiveness of policy and decision-making could be identified? A related question was: how significant are factors, such as cost and time in the use of information for decision-making and in the quality of decisions made? These two questions formed a part of the basis for the present study.

## 1.2 RATIONALE FOR THE STUDY

Information usage in terms of curriculum was directly influenced by the implementation of the Hughes Report's (1982). The report contained recommendations for a new organisational structure of the central administration of the Education Department of Tasmania. As a result, a centralised library service was created within the Division of Educational Program's Curriculum Resources Section. This service supports departmental officers and both school and secondary college teachers. Similarly, a library facility and information service was later created in the Division of TAFE's Curriculum Services Section to support the divisional officers. However, since the establishment of the two library and information services during 1983-84, there has been neither any assessment nor a formal evaluation to determine whether the services provided are meeting the specific client groups' information needs. Some members of the key client groups of the library services - the Curriculum Services Sections personnel - make a pertinent

judgement. First, they consider that the existing information services and library services have no impact on the quality of the decisions they make in the performance of their roles in statewide curriculum development and management. Secondly, there is evidence of great diversity in their usage of information in decision-making. There is a range of approaches to information acquisition, processing, and dissemination at this middle management level.

Consequently, the rationale for the present study derived from two focuses. They are: (1) the usage of information for effective decision-making, whereby effectiveness relates to the relevance and achievement of stated objectives; and (2) the planning and development of information services to meet a specific client group's information needs. These focuses rest upon the assumption that there is a direct relationship between information usage and effective decision-making in the area of curriculum management.

### 1.3 PURPOSE OF THE STUDY

The following questions appeared most pertinent as a basis for the present study:

- \* What are the information sources selected by middle management curriculum personnel in order to meet specific information needs?
- \* Is information usage, that is, information acquisition, processing, and dissemination related to individual or organisational characteristics, (such as position held, length of experience or organisational climate)?

- \* What factors, (for example, library based resource and information services) tend to enhance or obstruct information usage in effective curriculum decision-making?

Answers to these questions would enable an extrapolation of guidelines for the future planning and development of information services, to meet the information needs of client groups.

## CHAPTER 2: REVIEW OF THE LITERATURE

### 2.1 METHODOLOGICAL APPROACHES

A critical review of empirical investigations into the study of information needs and uses was provided by Kunz, Rittel and Schuchow (1977: 14-17). They proposed a useful theoretical clarification of this field. It provided a model for procedure in this review, in the sense that the approaches referred to highlighted key issues of the present study.

Three types of methodological approaches were distinguished. First, there were "dissemination studies". These dealt with the ways in which information originated from sources and was disseminated or used, as well as particular roles played by "information channels" for professional groups of users.

Secondly, there were "use and user studies". These were more narrowly defined, relating to the efficiency of specific information systems, and the behaviour of user groups in the context of psychological, social, linguistic and organisational systems of the user. The studies resulted in user typologies or behaviour predictions. The type of "user" was a set of particular information needs and not a class or group of individual people, as individuals may belong to several types of users.

The third approach was "information behaviour studies". The objects of investigation were the factors contributing to certain information needs or requirements. The relationship between problem-solving behaviour and information behaviour; and controlling factors such as motivation and preference, are

specific examples. Kunz, Rittel and Schuchow (1977) reported on a substantial body of literature related to the first and second types of approach, particularly on information use and information systems from the fields of library and information science, but also from management and administration. However, there were a limited number of investigations of the third type reported. That is, there are few studies on the analysis of information behaviour in specific problem-solving or decision-making situations, such as effective curriculum decision-making in educational administration.

## 2.2 STUDIES IN THREE CATEGORIES

Literature on recent and local studies on decision-making in the area of curriculum management, or its wider field of educational administration, are virtually non-existent. It is widely acknowledged by writers such as McClure (1978, 1980); Synnot & Gruber (1981); Hill (1984); Pratap Lingham (1984); and Rowley & Turner (1978) that the primary use of information is for decision-making. Nevertheless, it is apparent that the research literature has had little impact on those responsible for the planning of information services and information systems in educational administration.

The classification of methodological approaches by Kunz et al. (1977) provides a useful framework for a selective review of the research studies related to the questions of concern in the present study.

### 2.2.1 Dissemination, user and information behaviour studies related to the selection of information sources to meet specific needs.

The enormous volume of research on the characteristics

and behaviours of information users in the professional domains has emerged since the rapid rise of information technology. Information technology means computer technology in the online information searching and retrieval services in the traditional disciplines as well as in commercial information management services.

There are many studies citing personal, professional and psychological attributes common to specific groups of users in their information seeking behaviour. For example, Summers, Matheson and Conry (1983), studied the information use of approximately one thousand Canadian educational practitioners. They found that a complex set of interacting variables affected information seeking behaviour. Position or work role, information dissemination habits and attitudes played major roles in predicting the use of information sources. Education, experience or isolation from the sources played less significant roles. Characteristics of information sources, such as authority and accuracy, were more significant statistically than location or accessibility of the sources.

Newfield (1977) conducted a study to investigate the factors influencing the curriculum development process by identifying the topics of information demands of curriculum supervisors at the central office level in public school districts in Louisiana. In addition, the relationship between the topics of information demands and selected background factors or psychological characteristics of the supervisors were examined. It was concluded that their information demands were multi-dimensional; including topics of general information about the subject areas of the curriculum decision; were not related



to individual characteristics, and not completely consistent with any one decision model in a simulated decision-making task.

The significance of the results of Newfield's (1977) report for the present study is related to the decisions which must be made as part of the information dissemination process. Some recommendations for preparing information about curriculum projects for dissemination were included. For example, "effective packaging of curriculum products depends on knowledge of the topics practitioners consider when faced with curriculum decisions." (p. 124) The data concerning information sources used by the supervisors led to recommendations for inter-personal communication links in the dissemination process.

Other general American studies included Gerstberger & Allen's (1968) study of engineers and O'Reilly's (1982) study of social welfare administrators. In these, a more significant relationship was found between accessibility of sources and use rather than quality and use. But all studies support the notion that information seeking behaviour and the preferred information sources are dependent upon interacting variables of individual characteristics and decision-making pressures, rather than on task or job classifications.

The information sources investigated were wide-ranging. They typically ranged from places (e.g., libraries), persons (e.g., experts or colleagues) to materials (e.g. file memoranda, office notes, books, reports, journals or indexing services).

#### 2.2.2 Studies concerning whether information use, that is acquisition, process and dissemination is related to the organisational climate?

Some studies, (O'Reilly, 1983; McClure, 1983, 1985) on

information use suggest the potential importance of group communication as a source of information for decision-making. McClure (1983, 1985) reported on factors affecting information use for decision-making in one study of public libraries and one study of academic libraries in the United States. Library settings were chosen because the concept of information management is central to the libraries' goals of service. Further, there is an increasing awareness of decision-making processes as a means to improving organisational effectiveness in these settings.

The findings of the library studies suggest that decision-making is more effective in "open and healthy" organisational climates as well as "information rich" environments. But the specific nature of the relationship between information use and increased organisational effectiveness required further investigation.

One very exhaustive report and survey by Feldman and March (1981) incorporated empirical studies of information use in organisations. The report yielded results which serve to radically question the fundamental concerns in the present study. For instance, the authors suggested that the use of information is embedded in social norms that make it highly symbolic. This is a much broader framework than the more familiar observations about the value of information use in organisations based on classic decision-making theory. In the classical tradition, the management of information is driven by the desire to improve decisions. Information has value if it can be expected to affect choice or future consequences of decisions.

However, Feldman and March (1981, p. 174) reported that studies of information use revealed a very different pattern. They contended that the main observations are close enough to personal experience to be almost self-evident. These observations revealed that much of the information gathered and communicated has little decision relevance. Information is collected and interpreted after the decision has been made, and much of it is not considered in the making of decisions. Also, regardless of the information available, more information is often requested. Finally, the relevance of the information provided in the process of decision-making is often less conspicuous than is the insistence on the information.

These observations provided Feldman and March (1981) with reasons for "decoupling" information from decisions, describing it as "a signal and a symbol" in ritualistic patterns of social behaviour (p. 177). Therefore, the gathering of information is a representation of competence, efficacy and legitimacy.

Four broad explanations and some generalisations were drawn from this conspicuous over-consumption of information, by Feldman and March (1981):

First, organisations provide incentives for gathering extra information . . . Second, much of the information in organisations is gathered and treated in a surveillance mode rather than a decision mode . . . Third, much of the information in organisations is subject to strategic misrepresentation . . . Fourth, information use symbolises a commitment to rational choice. Displaying the symbol reaffirms the importance of this social value and signals personal and organisational competence. (p. 182)

The kinds of behaviour noted were more common in situations in which decision criteria were ambiguous, the performance measures were vague and there was slow feedback on the decision quality.

Feldman and March (1981, p. 153) speculated that these phenomena were more conspicuous in the public service rather than the private sector, and at the "top" rather than the "bottom" of the organisation.

Empirically, the application of Feldman and March's conclusions to the present study are attractive. The symbolic significance of information use is dependent upon the social norms in a setting - a particular set of attitudes and beliefs in a particular organisational climate.

### 2.2.3 Studies concerning the factors which enhance or obstruct information use in effective curriculum decision-making.

Reporting on curriculum development issues in Technical and Further Education (TAFE) from a national perspective, McBeath (1986, p. 40) found little discussion of them from the point of view of curriculum decision-making. The issues were those educational questions, such as "What is the purpose of vocational training?" which are relevant to the curriculum development process.

McBeath (1986) suggested that the curriculum decisions in TAFE appear to be based on intuition or professional judgement. Specifically, this meant "enormous intuitive leaps . . . based on knowledge and experience rather than conclusions based empirically on data." (p. 10) The aims of McBeath's (1986) recent project were to establish whether the key educational questions were being satisfactorily addressed and answered. Despite a very clear and tightly defined procedure for TAFE curriculum development, McBeath suspected that a whole series of important questions had not been dealt with.

Additional objectives of McBeath's (1986) study were to

identify what factors influence curriculum decision-making and whether informed intuition and professional judgement could remain the basis of decision-making? The intention was to find some principles to assist curriculum developers make their decision-making process more efficient and effective.

Curriculum research and development officers in three state TAFE authorities devised and applied a case study methodology. They worked closely with other researchers on nationally commissioned projects for curriculum implementation. Sixteen projects across Australia were part of the large survey of certificate, apprenticeship and pre-vocational courses.

McBeath (1986, p. 109) had three research questions. First, were curriculum developers aware of the vocational educational issues, and hence the curriculum options available to them? Second, were they collecting and using all the data necessary for them to make effective decisions. Third, did they understand the hidden interplay of personal and social influences affecting their decisions?

Biases and knowledge gaps were discernible in the findings. Whilst some curriculum decisions were pre-determined by outside factors, such as industrial agreements, others were made without proper assessment of the available options. McBeath (1986, p. 111) readily concluded that some curriculum developers required more guidance in choosing the data needed to make more effective decisions.

Conversely, a search of literature by curriculum officers in primary and secondary education areas centred on recent local reports. They revealed significant impact on curriculum decision making, especially those curriculum decisions

influenced explicitly by the higher level policy-making or external forces. In Tasmania, there were two topical examples.

One is the set of curriculum statements contained within the document, Secondary Education: The Future (1987). This was a policy statement published by The Education Department of Tasmania. One particular element of policy, on certification from the Schools Board of Tasmania was highly significant. It became the driving force of secondary renewal activities for central support services by the Curriculum Development, Evaluation and Measurement Sections of the Division of Educational Programs in the central office of the Education Department. Supporting documentation to assist schools implementing the policies is being disseminated currently.

Second, the publication, Health Education in Tasmanian Schools and Colleges (1987), produced by the Education Department contains a policy statement and draft statement on the curriculum framework. Clearly this statement was influenced by national pressure groups on sex and drug education, national and state government commissions. Also, as a centrally directed program by the Education Department, it is having a significant impact on curriculum development, implementation, in-service training and resource production in the schools and colleges. The comparative review of these two publications as current organisation documentation forms an integral part of the present study.

### CHAPTER 3: DEFINITION OF TERMS

The key terms used in the present study are employed in their broadest sense.

#### 3.1 INFORMATION

The term , 'information' is used in a number of related contexts. It may refer to terms, such as 'fact or 'data' in pure research, a commodity at a technical level, or 'knowledge' on a semantic level. In the present study, information is defined as data of value to decision-making.

#### 3.2 DECISION-MAKING

This refers to the conscious choice of a course of action. It may refer to classical conceptions of organisation theory and decision theory in administrative or management science. Here the concept of decision-making has become an operational construct involving the performance of a number of discrete steps in a process. These steps may include any of the following: (a) the identification of a question or a problem, (b) the identification of alternative options or solutions, (c) the identification of criteria for the conscious choice of an option, (d) the analysis of the information or data collected about each option, and (e) the application of criteria in the choice of the alternative solution. Such a traditional and formal view of decision-making provided the basis for this concept in the present study. Building upon formal theories of rational choice (Weber, 1947 cited in Hoy & Miskel 1982) in organization theory, to present day research studies on the managerial decision-making process, (Harrison, 1975; Janis & Mann, 1977; Hoy & Miskel, 1982; O'Reilly, 1982), information is

valued now because it assists the process of making choices in decision-making.

### 3.3 INFORMATION USAGE

'Information usage' is the totality of the application of any information. This application embraces the acquisition, communication or dissemination, the processing and evaluation of the information. It implies both the act and mode of using.

### 3.4 INFORMATION SERVICE

A distinction is made between the phrase 'information service' and the notion of library and resource-based service. The phrase 'information service' is used in a more strict sense, as it is used in the fields of library and information science. Therein the term implies an individual agency or institutional delivery of information retrieval services, particularly computer-based services, such as periodical indexing or abstracting services. Hence, the term, 'library and resource-based services' used here, relates simply to the delivery of oral or printed information via the traditional reference sources. These sources may be books, periodicals, other research materials and the professional librarians' reference services.

### 3.5 CURRICULUM DECISION-MAKING

In the present study, decision-making is applied to curriculum management. An operational framework of curriculum management encompasses curriculum theory, curriculum research, curriculum development, implementation, evaluation and measurement. Most studies, which have had an impact on this field of educational theory, such as Taba (1962), Cronbach (1963), Goodlad's (1966) study cited in Newfield (1975), and



Stenhouse (1975) explore some relationships between information and curriculum decisions. Thus, the phrase 'curriculum decision-making' refers to all these areas of curriculum management based upon a formal view of the approach to decision-making. For example, decisions taken in curriculum management may include the establishment of goals for an educational program, the selection of subjects or courses through which the goals can be achieved, and the identification or evaluation of intended outcomes that characterise the contribution of the subjects or courses in a program. Curriculum decision-making also encompasses dissemination of the curriculum, planning for its implementation, and evaluation of both a 'curriculum' itself and the developmental processes. Consequently, the notion of 'effective curriculum decision-making' can be extended to mean the relevance and achievement of the educational goals or specific curriculum aims by the conscious choice of a course of action.

### 3.6 ORGANISATIONAL CLIMATE

This term is used in the present study to refer to perceptions and values held by the members of an organisation in relation to the characteristics of the organisation's setting or internal environment. Without reference to the numerous models in the research literature, the term simply refers to qualities of the internal environment that are experienced by the organisation's members. Those qualities are attributes or factors which influence organisational behaviour. However, Halpin and Croft's (1962) "open" and "closed" climate measures, (cited in Hoy and Miskel, 1982) are terms specifically employed in the present study. The notions, "open" and "closed" have

common meanings in familiar speech which are readily understood.

## CHAPTER 4: METHODOLOGY

### 4.1 INTRODUCTION

The methodological approach chosen was one of exploratory research, based on:

- \* the preliminary investigation into the problem and the underlying assumption that a relationship exists between information use and effective decision-making.
- \* the identification of the research questions such as:
  - . How can information be used to increase management effectiveness?
  - . What part, do factors such as time and cost play in the use of information for decision-making?
- \* a description of those factors which are critical to effective decision-making, which in turn, may identify needs in the delivery of information services.

### 4.2 DATA COLLECTION

A descriptive method of analysis included the following combined means of generating and collecting data:

- \* questionnaire survey,
- \* schedule of interviews - interviewees from questionnaire survey sample
- \* a comparative review of the organisational documentation, obtained from interviewees.

### 4.3 POPULATION SAMPLE

The case study nature of the focus on curriculum decision-making identified a relatively well-defined sample from

the population of middle management personnel in the Division of Educational Programs and the Division of TAFE of the Education Department of Tasmania.

Approval was sought and obtained to survey the sixty officers in the Curriculum Services sections. All participants were directly involved in the centralised curriculum development and evaluation support services to schools and colleges. Further, approval and support for the research and administration of the survey instruments was requested of the most senior officers, the Superintendents, of each Section. The Superintendents agreed to distribute the questionnaires accompanied by a covering personalised letter to each of the Section personnel. The introductory letter indicated the method of collection of responses by the researcher on a fixed date. (See Appendix A).

All 60 officers received copies of the introductory memorandum and questionnaire by internal mail during the week commencing Monday, 23rd November, 1987. A period of three weeks was allowed for the return of the questionnaire. From the sample of 60 officers, 30 responded to the questionnaire, giving a 50% response rate. The survey coincided with two unanticipated events which probably accounted for the low responses. First, there was an intensive period of intra-state teacher's professional development activities being conducted by the target sample of generalist curriculum consultants. Secondly, this was a period of rolling strikes and over-time bans by officers as members of the Union, the Tasmanian Teachers' Federation. Such an unstable climate of union dissatisfaction did not warrant the attempt to increase the response rate by

follow up reminder questionnaires. Also, it was impracticable to follow up non-respondents at that point in the year due to the vacation leave of the majority of the population sample.

Nineteen interested questionnaire respondents were contacted personally by telephone during early February, 1988 to make interview appointments during the remainder of that month. Interest was reflected in the fact that 19 officers had indicated at the end of the questionnaire that they were prepared to take part in a follow up interview. However, the availability of officers between periods of intra-state travel (on professional development activities in the normal course of their duties) also had to be taken into account. Finally there were 12 officers available for interview and each interview lasted approximately half an hour.

Some personal and professional characteristics of the population sample of curriculum officers were indicated by initial questionnaire responses. Respondents stated their current position (position/title or position/classification) and their length of experience. This information is tabulated. (See Appendix D: Sample of respondents by position and experience).

#### 4.4 INSTRUMENTS

##### 4.4.1 The questionnaire

This survey instrument was chosen for its potential capacity to collect in an impersonal manner, a large amount of relatively factual information as well as some attitude measurement. In designing the questions, the intention was to elicit information specifically on the three objectives of the study:

- \* What are the information sources selected to meet specific information needs?
- \* Is information usage related to individual or organisational characteristics?
- \* What factors tend to enhance or obstruct information use in effective curriculum decision-making?

The preliminary investigation, involving discussions with colleagues and observed behaviour in regard to information use, clarified and supported the theoretical constructs and semantic ordering of questions reported in the research literature. In particular, the information user studies in education fields provided useful descriptions of attitudes to, and attributes of, information use. The research of Summers, Matheson and Conroy (1983) is an example in which attention was paid to personal and professional characteristics, such as length of experience, attitude scales and general information seeking behaviour.

Structured questions were designed for nominal scales and to obtain ratings on ordinal scales for the sources of information. Open-ended questions on the use of information were adopted to obtain a greater variety of responses indicating attitudes, values and experiences.

Piloting of the questionnaire resulted in reducing the size and length of questions, eliminating ambiguities, question overlap and over-precision in the ordering of items within questions. The pilot sample was small but included a cross-section of the population. A combined questionnaire-interview method in the pilot sampling confirmed both the choice of a broad definition of information, and a

sensitive tone to avoid respondents' interpretations of questions as evaluative measures of performance.

#### 4.4.2 The interview schedule

On the conclusion of the questionnaire form, respondents were invited to participate in a follow-up interview by recording their name. The aim of an interview was to provide more detailed responses on preferences for sources and characteristics of information, but predominantly to obtain information on the second objective of the study:

- . Is information usage, that is, information acquisition processing and dissemination related to individual or organisational characteristics, such as position held, length of experience or organisational climate?

Individual perceptions of the environmental factors and the values held by the officers as members of an organisation needed to be explored.

Similarly an interview schedule was considered the best instrument for obtaining information about causal links between information use and decision-making - the third objective of the study. A free ranging section of the interview was planned to adopt the "critical incident" technique as developed by Ulsack (1983). That is, reports of personally recalled incidents of decision-making could provide a richer description and triangulation of the review of related organisational documentation. For example, curriculum decisions described in retrospect could potentially reveal much information about the decision-making process.

The choice of interview questions was influenced by Cohen & Manion's (1985) useful chapter on the techniques of

triangulation for the use of two or more methods of data collection to gather richer descriptions of some aspect of human behaviour. Specifically, this means the techniques of time-triangulation to pose the same questions over a period of time, and methodological-triangulation in using more than one instrument.

#### 4.4.3 Comparative review of organisational documentation

Cross-checking of findings from interviews against documentary material aimed, not only to provide another perspective, but also to establish how and why decisions were made. References made to any material during the interviews would be traced to their source records, reports, relevant organisational statements, and minutes of committee meetings, etc. This documentation would provide an additional check on the hindsight of recalled curriculum decisions. The process of decision-making, such as the factors influencing the decision, were considered as important as the decisions themselves.



## CHAPTER 5: RESULTS AND INTERPRETATIONS

In the following two sections, the results are reported in terms of the three main concerns of the study. (1) - Section I - the selection of information sources; (2) - Section - II the relationship between information use and individual or organisational characteristics, and (3) - the factors promoting information use in effective curriculum decision-making.

### 5.1 RESULTS FROM SECTION I OR QUESTION 1:

#### SELECTION OF INFORMATION SOURCES

Questions in this first section of the questionnaire and the interview were intended to ascertain the frequency and usefulness of use of a range of information sources.

##### 5.1.1 Questionnaire

In the distribution of responses, as shown in Table 1, at least half of the respondents 'sometimes' or 'often' sought most of the sources of information. The sources of external libraries, research reports, abstracting services or computerised retrieval services were the exception. Only four respondents indicated the use of 'other' sources; notably all four stated frequent use of information from interstate colleagues.

TABLE 1

Curriculum officers' use of different sources of information  
N = 30

Sources of Information	Never	Seldom	Sometimes	Often	Unspecified
Ideas resulting from discussion with colleagues or supervisors	0	0	5	25	-
Notes, files, or correspondence in office	0	1	5	24	-
Books, handbooks or administrative guidelines	0	5	12	13	-
Curriculum documents or statements	0	0	10	20	-
Professional journals	0	4	11	15	-
Workshops, seminars, course of study and committee meetings, etc.	0	4	10	16	-
Outside experts, consultants, employer groups, clients or government agencies	1	8	14	7	-
Inter-departmental contact with colleagues in other units	0	7	14	9	-
Departmental libraries	0	3	10	17	-
External libraries, e.g. public, academic, special or government	2	14	11	3	-
Research reports, theses, dissertations	0	15	11	4	-
Abstracting, indexing, bibliographic or documentation services	0	14	13	3	-
Computerised information retrieval from data base services, e.g. ERIC	4	16	8	2	-
Other sources? (Please list if any)	0	0	0	4	26

### 5.1.2 Interview

The intention of these questions was to provide the opportunity for freely expressed ranges of information sources likely to be selected by the officers to meet specific information needs. The officers were asked two questions: "What kinds of information do you need in your work?" "What sources of information do you use?"

Selected responses to this first question were:

"There are two kinds. One is sheer data about what other people are doing in other places for comparative reasons. The second is a developmental sort, which is already critically analysed."

"One is technical information . . . the trade areas. Then, information regarding employers . . . sorts of people for working parties, e.g. the ITC [Industry Training Council] and CAP's [Course Accreditation Panels]. Third, information about curriculum services interstate."

"Course requirements interstate . . . contact people . . . other information about TAFE."

"Course requirements from industry, commerce, and other community groups."

"Curriculum documents from interstate and within the State."

"State of the art reports on various projects . . . a pool of central reports. Short answer descriptions of the current literature and reviews in the back of journals. I don't have time to read the articles . . . read the reviews only to keep up-to-date."

"Three categories. One is factual. I need to keep up to date . . . specific information on site. The status of the information changes daily. Information from a national level. Secondly the library literature - often it is not in the specific area and I use my own network. Third, a network of key contact people."

"Depends on the kind of work . . . Educational research, measurement and evaluation - more for professional information as much as anything."

There are two levels, (1) for background knowledge and (2) intensive research when the need arises."

"There are levels of information - professional self development and organisational efficiency - policy information; guidelines; and on consultations."

In reply to the second question, "What sources of information do you use?", the responses of a personal 'network' or 'key people to contact' by seven respondents were the major source of information. Five respondents indicated research reports, national or government reports, as a source of information. The sources - handbooks, directories and curriculum documentation were each mentioned three times. Three respondents cited interstate groups of educational bodies and institutions as another major source of information. Some illustrative examples are:

"Personal contacts e.g. communications by phone"

"The 'contact people'"

"Contacts . . . interstate of key people"

"Personal network around the country"

"Interviewing of people"

"The library's circulated journals . . ."

"Use the library"

"Handbooks, projects in progress reviews"

"Overseas journals, national reports, working party reports and reports filtered down through senior management"

"Directories, handbooks, reports"

"Commonwealth government handouts, data, guidelines, submissions, documentation"

## 5.2 RESULTS FROM SECTION 1 OR QUESTION 2:

### MOST USEFUL SOURCES OF INFORMATION

#### 5.2.1 Questionnaire

The officers were asked to rank sources of information in order of usefulness. Table 2 presents the mean for the fourteen items and their ranking.

TABLE 2

Mean and rank order of the  
most useful sources of information  
N = 30

Sources of information	Ranking			Mean	Rank Order
	1	2	3		
Ideas resulting from discussion with colleagues or supervisors	15	5	4	8	1
Curriculum documents or statements	2	5	5	4	2
Professional journals	5	5	1	3.66	3.5
Workshops, seminars, course of study and committee meetings, etc.	3	1	7	3.66	3.5
Departmental libraries	1	5	2	2.66	5
Notes, files or correspondence in office	1	3	3	2.33	6
Books, handbooks or administrative guidelines	2	1	1	1.33	7
Outside experts, consultants employer groups, clients or government agencies	1	1	1	1	8.5
Computerised information retrieval from data base	-	-	3	1	8.5
Interdepartmental contact with colleagues in other units	-	2	-	.66	10
Research reports, theses, dissertations	-	1	-	.33	12
Abstracting, indexing, bibliographic or documentation services	-	1	-	.33	12
Other sources	-	-	1	.33	12
External libraries	-	-	-	0	14

### 5.2.2 Interviews

Curriculum officers were asked to nominate the sources of information which they found useful in their work. There was a preference for contact with other people by 24 out of the 30 respondents. Some responses indicating this preference included the following:

"Personal contact with people is the most useful. I build up a dossier of people to work with."

"People . . . who is doing what what, when and where? . . . a constant need."

"The network of key people to contact is the most useful. It is a juggling act, balancing that with the climate and context of change."

The use of curriculum documents or statements as a major source of information was similarly mentioned, being described by one subject as 'on the job' information. Other respondents alluded to their need to monitor these major sources. For instance:

"Curriculum documents. I have them ready in case I need them."

"Interstate curriculum statements to ensure that there is no doubling up . . . rather than re-inventing the wheel, so to speak."

"I wonder if there are gaps in the information I should have."

Four subjects were critical of the usefulness of the professional journals (circulated or available from the departmental libraries) for not meeting their specific information needs:

"I don't have time to read the articles. I read the reviews only. There is a lot of waste in the library's circulation of journal contents lists."

"The library's literature is not often in the specific area I need."

"More often as not, the library hasn't the recent article, or they can't find it."

There were similar responses about the lack of accessibility, up-to-dateness, or ready availability of sources of information, regarded as the most useful to meet a specific need. For example,

"I don't use data bases as much as I should. I don't know how to access them."

"Handbooks, reports, guidelines, . . . It is documentation that I often have to purchase myself."

"I need better lists of courses interstate than just the handbooks."

"The directories are terrible."

Endeavouring to gather more specific impressions of the sources of information required to meet a particular need, the next questions were: "Have you made any specific enquiry for information lately?" and "What was the reason?" All 12 officers responded positively, indicating a recent enquiry, the source consulted, and the reason for making the inquiry. The wide range of topics included:

". . . the need for updating a vocational syllabus;"

". . . more information about a new broad based vocational skills course interstate;"

". . . collecting information and requirements in a technological area of industry;"

". . . a syllabus document;"

". . . a specific report statement on accountability of funding to a particular disadvantaged group;"

". . . survey recent clearinghouses's reports on curriculum projects in progress;"



". . . finding out whether a particular course exists elsewhere (interstate);"

". . . basis of funding of a new program;"

". . . information on a thesis topic in order to mark the thesis;"

". . . review of a course;"

". . . information on a new project in the field [in a school];"

". . . locate information about similar work on a particular evaluation topic in other parts of the world;"

". . . intensive search for research literature on a project."

The multiple sources consulted in each incidence are presented in Table 3.

TABLE 3  
 Type and frequency of sources consulted  
 during interviewee's recent enquiry  
 N = 12

Source	No. of times cited
Asking a colleague or supervisor	1
Using the departmental library's services e.g. literature search	6
Contacting interstate educational authorities	2
Contacting a private agency or organisation	3
Consulting a recent report	4
Contacting a school or college	1
Using notes, files, or correspondence in office	1
Using abstracting service e.g. interstate Clearinghouse	2

Only one respondent indicated some dissatisfaction with the results of an enquiry. It was the unavailability of information on whether a particular course existed interstate. Some difficulties were expressed about the process of the enquiry, although there was negligible dissatisfaction with the outcomes. It was mainly delays in acquiring recently published reports which was cited twice. In the relevant incidences, services by the libraries were reported positively in terms of the actual search and location of information.

### 5.3 RESULTS FROM SECTION 1 OR QUESTION 3:

#### FACTORS AFFECTING THE USE OF THE SOURCES

##### 5.3.1 Questionnaire

The majority of respondents (25 out of 30) identified accessibility as a factor which affected their use of the information sources. Work environment was regarded as a factor by 16 respondents. Only one respondent gave isolation as a factor, but 10 respondents enumerated other factors.

In the space provided to detail other factors, lack of time was the most common response. For example:

"Often decisions [are] required too quickly to consult."

Other respondents expressed concern about accessibility of the sources, such as:

"Documents are sometimes not held in Tasmania"

But several respondents cited additional factors which affected their use of the sources:

"Other people available to access the information"

"Personal inadequacies"

"Absence of staff at my disposal"

"Knowledge of what is available"

"Relevance"

#### 5.4 RESULTS FROM SECTION I OR QUESTION 4:

##### IMPORTANT CHARACTERISTICS OF INFORMATION SOURCES

##### 5.4.1 Questionnaire

Respondents were asked to rate how important each of the listed characteristics of information sources were to them.

(See Table 4).

TABLE 4  
Importance of characteristics of  
information sources  
N = 30

Characteristics of Information Sources	Importance			
	Not Important	Of little Importance	Important	Very Important
Close at hand, and usually accessible	-	-	10	20
Ease of use	-	2	13	15
Accuracy, reliability relevance, specificity and authoritativeness	-	-	9	21
Presentation of a range of viewpoints	-	3	15	11
Gives leads to other sources	1	4	16	9
Timely and responsive to a need	2	1	10	17
Keeps you informed of new developments	1	1	10	18
Free, or inexpensive to acquire	5	7	14	4
Completeness, up-to-dateness and comprehensiveness	-	15	15	
Other: (Please list if any)				
- - - - -	-	-	-	-
- - - - -	-	-	-	-

Three characteristics were added to the list by three respondents. They were 'brevity', or 'conciseness', and a longer comment:

"Concise and targetted provision of information by persons trained to collect and select."

## 5.5 INTERPRETATION OF RESULTS FROM SECTION 1 QUESTIONS 1 - 4

In the questionnaire, the sources listed were those likely or known to be used by curriculum officers in this middle management level of Education Department central support services personnel. However, in the interview, the purpose of the general and introductory nature of the first question; "What kinds of information do you need in your work?" was to indicate how officers may perceive or understand personally the semantic difference between 'kinds of information' and 'sources of information'. Specifically, this means the difference between various types of information, compared with knowledge of the routes or formats in which information can be channelled or received.

The interview responses to this first interview question were elucidating for their alternative perspective to the structured list given in the questionnaire. Ten out of the twelve interview respondents had articulated clearly an understanding of the semantic difference between 'kinds' and 'sources' of information.

Responses to the second interview question, "What sources of information do you use?" the responses matched the sources indicated as 'often sought' in the questionnaire. Contact with colleagues, and ideas resulting from discussion were questionnaire responses consistent with the personal 'network' or 'key people to contact' responses of the interviews. Serving as a simple indicator of attitudes, this preference for contact with colleagues, and ideas resulting from discussion, is highly reminiscent of previous studies. For example, McClure (1983, 1985), O'Reilly (1983) and Newfield (1977) had all signalled the

potential importance of interpersonal and group communication as a source of information.

In addition, the notion of sources of information in organisations being treated in a surveillance mode (from Feldman and March, 1981, p. 182) was illustrated explicitly by responses to the questions on the most useful sources. Respondents were concerned about monitoring or avoiding potential gaps in information available from the major sources consulted. This concern was linked to the criticisms about the existing journal circulation and information retrieval services of the departmental libraries. There was an associated and serious implication about the lack of accessibility or ready availability of those sources of information regarded as most useful to meet specific needs. Accessibility had been identified as the major factor affecting use of the sources of information.

In regard to the most "important characteristics" of the sources of information, the questionnaire responses (Table 4) were entirely predictable given the comments on accessibility, up-to-dateness, timeliness, relevance and surveillance in previous sections.

There was another aspect highlighting the problems identified as significant factors affecting the use of the sources. That is, a need was expressed for the availability of people trained to identify access points or the relevant information sources. This factor appears as equally significant as those groups of factors identified as accessibility or the constraints of time.

Finally, one deviance in the results in this first



section was notable between Tables 2 and 3. The questionnaire responses ranked in Table 2 for the most useful sources, and again as the explicitly stated preferences for inter-personal communication during the interviews is in sharp contrast to the single incidence of consulting a colleague in Table 3. However, those figures in Table 3 concern 12 officers only, rather than the 30 respondents to the questionnaire item in Table 2.

## 5.6 RESULTS FROM SECTION II OR QUESTION 1:

### DIFFICULTY IN FINDING AND USING INFORMATION

#### 5.6.1 Questionnaire

Respondents were asked to indicate the degree of difficulty in finding and using information from a list of available choices. The results are presented in Table 5, following.

TABLE 5  
Degree of difficulty in finding and  
using information  
N = 30

Degree of difficulty	Not Difficult	Moderately Difficult	Difficult	Very Difficult
Finding time to seek information	6	7	11	6
Getting information promptly	6	15	8	1
Getting most up-to-date material available	7	10	11	2
Locating useful or suitable sources	8	15	6	1
Analysing report findings or research statistics	18	5	5	2
Financial costs and budget restrictions	11	11	7	1
Lack of professional assistance to locate information	19	5	4	2
Disseminating the information for use by others	13	12	4	1
Evaluating competing sources of information	13	15	2	0
Knowing how to obtain access to information retrieval services, e.g. computerised data base services, such as ERIC	16	6	4	4

## 5.7 RESULTS FROM SECTION II OR QUESTION 2:

### FREQUENCY OF DISSEMINATION OF INFORMATION TO OTHERS

#### 5.7.1 Questionnaire

Respondents indicated that they need to provide and disseminate information to others on a regular basis in question II 2. Only one respondent indicated that this is a rare occurrence. Five respondents indicated that they need to make such provision fairly often, 10 that such provision is a regular need, and 14 that they need to make it very often.

## 5.8 RESULTS FROM SECTION II OR QUESTIONS 3 AND 4:

### INDIVIDUAL OR ORGANISATIONAL CHARACTERISTICS AS FACTORS ENHANCING OR OBSTRUCTING USAGE

#### 5.8.1 Questionnaire

Questions 3 and 4 asked respondents to identify factors which enhanced or obstructed information use, e.g. acquisition, processing or dissemination of information for making effective decisions.

The individual characteristics of position and experience were identified by over half the respondents as factors enhancing the use of information. Only two respondents felt that 'position' obstructed information use. A slightly higher number (five respondents) felt that 'experience' obstructed information use. These relationships are shown in Tables 6 and 7.

TABLE 6

Factors which enhance usage of information  
for making effective decisions  
N = 30

Factors	Number of responses
Open organisational climate	20
Access to libraries and information services	24
Position	26
Experience	18
Other	2
Unspecified/nil response	-

TABLE 7

Factors which obstruct usage of information  
for making effective decisions  
N = 30

Factors	Number of responses
Closed organisational climate	7
Isolation from libraries and information services	1
Position	2
Experience	5
Other	8
Unspecified/nil response	13

### 5.8.2 Interview

The interview questions (no's. 5-7) were:

"How would you describe your work environment?"  
 "Broadly speaking, is it open or closed, autonomous or controlled? Does this kind of work and/or climate affect your use of the information?"

Responses to this group of questions indicate the effect of the work environment on information usage:

"It allows me to operate as a free agent. I am very comfortable."

"It is busy, demanding and challenging - fairly open. Time is the main factor. You have to be a jack of all trades: It is lacking in an adequate support service - do everything myself."

"We are fairly autonomous. Needs are decided by consultative processes of management, through committees, etc."

"I am autonomous, having an open hand. That is the way planning works."

"Open. The limitations are known and those upon myself. I have ultimate control over a lot of information, and generally speaking, I disseminate it openly . . ."

"It is a political one . . . with interaction at a wide range of levels through the Section. It is open within that framework. For example, interaction with colleagues in this room. Yet, inquiring about other people's work . . . so its business not friendly . . . often controversial information. What we do with the information is the single most important question we deal with . . . how we make use of the information?"

"Open. Goodwill is crucial. There is a high degree of professional autonomy . . . everyone has their job to do . . . The right people with the right function."

"Open . . . freedom to pursue particular projects. Deadlines and expectations are there that I have to meet . . . a lot of non-negotiable things . . . with not much room to manoeuvre. But, a very large part . . . is developing new approaches, with innumerable committees and working parties preparing papers. Yes, the climate does affect use. A lot of it doesn't require access to current research etc., just

"en masse" communication with 1:1 problems, people wanting advice, trouble-shooting or circulars to schools."

However, a small number of respondents presented alternative descriptions of the way in which the organisational climate affected their information use.

"Autonomous within a closed system. For my own purposes, there is no expectation to improve the organisation through use of information. Basically I collect it. There is lack of time. But there is a lack of an ethos which respects the use of diverse sources of information."

"It is closed, but I am at the 'tail end' of the process. My use is purely by instruction. The climate inhibits the use of information. There is not the time, nor the perceived need for background information. It is only the physical set-up in the open plan office that enables me to hear what is going on."

"It is not open. It is compartmentalised with people doing their own jobs. There is not much overlap or consultation. It's not closed, but I have to go out and get the information. Dissemination is confused. For instance, . . . How do you disseminate it - the report. I need someone like . . . to depend on their responsibility to disseminate it."

## 5.9 RESULTS FROM SECTION II:

### FACTORS AFFECTING INFORMATION USAGE IN EFFECTIVE CURRICULUM DECISION-MAKING

The last sections of the questionnaire and interview included open-ended questions related to decision-making. The intention was to gather additional information about possible causal links between information use and aspects of the decision-making process.

#### 5.9.1 Questionnaire

Questionnaire responses to questions 3 and 4 on the perceived relationship between information usage and individual or organisational characteristics were tabulated previously in Section 5.8 (Tables 6 and 7). Equally significant were the number of nil responses and additional comments given to these two questions.

Some additional comments were made by two questionnaire respondents regarding factors which enhanced information usage. They were related to information acquisition:

"Colleagues who make heavy use of the information sources and pan on to me, much information of value."

"External study programs."

However, there were numerous "other" factors detailed by eight questionnaire respondents which obstructed information use, and mainly related to the aspect of time constraints. These responses were:

"Having sufficient time to access library information. Report writing and research work is carried out either at home or . . . while travelling."

"Work bans placed on teachers by the TTF [Tasmanian Teachers' Federation]."



"Major limitations in relevant resources  
(human and otherwise) . . ."

"Time to disseminate the material."

"Time and access to experts."

"Time required to obtain information."

"Immediacy of information."

"Lack of time."

"Need to follow 'protocols'."

"Time!"

Some 13 out of the possible 30 respondents did not identify any factors which obstructed information use for making effective decisions. In comparison, there were not any nil responses for the identification of factors which enhanced information use. In contrast, another dimension was added by this response to both questions:

"Decision-making is a political process. Information is only one of the many factors which influences decision-making - sometimes, it is one of the least important factors."

#### 5.9.2 Interviews

Question 8 sought information about the most important or successful decisions often made in the respondents' position. Three subsequent questions concerned the approach taken in making a decision (question 9), the sort of information necessary to make a decision (question 10), and details of a recent example (questions 11 and 12). The details and extracts from the lengthy responses are summarised in Table 8 and cited in Appendix E.

Responses to question 8 were decisions defined simply and cited frequently, such as approval of projects, recommendations to senior management, assessment of curriculum needs or

evaluation of actual programs or projects.

Responses to question 9 were varied. For example:

"I get all the information available. If there is sufficient information, I make a judgement. If not, I make a value judgement. If it is a policy statement, I usually consult with superiors. I use an information gathering approach as encouraged by . . . [senior officer]. The decision then becomes self-evident."

"I get all the data. It is the nature of the job. Everyone wants a decision 'yesterday'. I base my decisions on intuition and experience if there is no documentary proof."

"It is important. Assess what needs to be done to achieve ultimate goal . . . "

"I check with colleagues. A collaborative approach. A lot of decisions represent high level policy . . . and a lot of it is sensitive."

"Particular decisions are made in consultation, e.g. at lunch time, while we are working . . ."

"A lot depends on personal style or magnitude of decision. It is often a tedious process of negotiation. Monetary decisions are a quick assessment . . . they are easy and quantifiable."

"Experience based on a reasonable knowledge of the environment."

"Decisions evolve within the system. Development of curriculum involves several levels . . . a consensus emerges or a group decision of what has evolved . . . "

TABLE 8

Kinds of information available  
and necessary for decision-making  
N = 12

Decisions	Information necessary	Documentation provided
To develop a new course	Information from College and industry representatives	Nil
To accept a proposal for funding a new course development project	Review of similar proposals interstate; review of state and national policy statements	The proposal
To develop and disseminate information on a new trade course	Policy statements; consultants' reports about the industry; consultation with state curriculum and industry training committees	Publicity material to attract enrolments
To make a syllabus redundant	College administration details on history of student enrolments	Course syllabus
How to disseminate a report	Consultation with senior management, college staff and curriculum co-ordinators	The report
To organise a national meeting	Consultation with senior management	Working notes on proposed agenda and participants
To obtain accreditation of new courses	Evaluation data on programs	Course syllabus and evaluation reports
Which Commonwealth funded programs to be mounted in Colleges	Current distribution of funds in Colleges	Nil
To implement a curriculum policy statement and program in schools and colleges	All available information on trends interstate and overseas; reports of a working party	Curriculum policy statement and documents
To evaluate a project through action research	Consultation with project officers	Documentation available on conduct of project
To disseminate a curriculum product and information about its evaluation	Consultation with curriculum officers and school personnel involved	The evaluation report
To provide a position paper on a new approach to assessment	Research articles in recent literature; consultation with working parties	The position paper

## 5.10 COMPARATIVE REVIEW OF ORGANISATIONAL DOCUMENTATION

### 5.10.1 Automotive Technician Training in TAFE

The rapid changes in information technology in the automotive industry led to a review of the national core curriculum by TAFE Authorities and the industry groups. One objective was to develop a new stream of courses to provide more "high-tech" automotive technicians to service the new "high-tech" motor vehicles. Giving this background information, one interview respondent presented a dossier of information being collected on the course development which included minutes of meetings of the Industry Training Committee and Consultants' reports on the information sharing networks and industry needs analysis.

### 5.10.2 Health Education curriculum materials

Another example of documentation was provided on the impact of information use on the curriculum decision-making process. This was the collection of published papers currently being distributed to schools and colleges by the Health Education Unit of the Curriculum Services Section. The draft documents (Health Education, 1987), were being reviewed by representative community and school working parties. They were outcomes of extensive consultation with national, government and non-government agencies, or the agencies' provision of information and resource materials. The effectiveness of the decision-making process on the schools' program was clearly dependent on the central policy direction of the Education Department. For example, the appointment of co-ordinators in each school and college and the resulting communication files gave ample evidence of the consequent impact of the program on

the schools.

### 5.10.3 Tasmanian Certificate of Education

A very large part of the centrally directed policy for "secondary education renewal" by the Education Department has been the development of new approaches to assessment of students' achievement. In particular, this includes the new Tasmanian Certificate of Education. Following its introduction, one interview respondent presented extensive documentation. It included initial research and review of the literature on assessment and records of achievement, minutes of numerous working parties and committees, position papers prepared for committees, and memorandums to schools. Such documentation provided a record of the decision-making process prior to the implementation of the policy.

## 5.11 INTERPRETATION OF RESULTS FROM SECTION II

The highest degrees of difficulty in finding and using information were in finding time, getting information promptly, getting up-to-date material, and locating suitable resources. These responses were similar to those factors of accessibility, timeliness and relevance highlighted in the use of information sources. Another area of congruence between difficulty in using information and important characteristics of information sources was the factor of financial costs. Nearly two thirds (19 respondents) found some difficulty with cost, and a similar number (18 respondents) indicated that it was an important characteristic.

The main contradiction of results from this previous section was the item relating to lack of professional assistance

in locating information. Only 11 out of 30 respondents indicated a degree of difficulty. Yet several respondents cited this factor in relation to the lack of time, and availability of trained staff at their disposal to assist in the location of sources. A rival explanation could be that it indicated a clear distinction by respondents rather than an ambiguity between use of the sources of information and using information per se.

There were 17 out of 30 respondents who indicated any level of difficulty in the dissemination of information for use by others. However, all respondents except one indicated that they needed to disseminate information.

As shown in Tables 6 and 7, there were clearer extrapolations available from the questionnaire results about organisational climate. There was a high response to an open organisational climate as a factor which enhanced information usage.

The interview responses reinforced this result. Several comments were offered about the direct relationship between an open organisational climate and actual information use, particularly its open and deliberate dissemination.

A less significant number identified a closed organisational climate as a factor which obstructed use. It is noteworthy that the small number of interview respondents with strongly expressed negative views were from a group of people working in close professional proximity. Their positions and experience were as similar as the nature of their work. Further, the three respondents indicated various obstacles in their dissemination of information emanating from the closed organisational climate.

Again, the high response for position as a factor which enhanced information usage (26 out of 30 respondents) as shown in Tables 6 and 7, is supported by the interview responses. Each interview respondent who described their work environment as open also described the nature of the professional autonomy in their work. In particular, they emphasised their freedom to choose directions at this middle management level, albeit by consultative processes.

The high response (24/30 respondents) for access to libraries and information services as an enhancing factor was predictable. Most respondents found little difficulty with access to information (see Table 5). Only one respondent noted isolation from these services as an obstructing factor. Thus isolation was not perceived as the antithesis of accessibility. The factor of finding time in relation to access to information was the more significant factor in using information.

Concerning the perceptions of any causal links between information usage and the effectiveness of decisions made, one interview response was particularly illuminating. This was in regard to information dissemination:

"What we do with the information is the single most important question we deal with. It is the thrust of the Department through Curriculum Services. That is, how we make use of the information? For example, the final report on . . . how can we distribute it? What process . . . to give the information to them [teachers in schools] and make them think about the issues? To distribute a product is a waste of time - just to give someone, something. It's superficial. Dissemination is a process. It has to be related to something you started out with. We want people to do something with it [the final report] - initiating or spreading the process on a wider scale."

Position, organisational climate and access to

library and information services were related to information use, and in fact, enhanced effective decision-making. However, it was the constraints of time, accessibility to up-to-date information and trained personnel which most obstructed information use in decision-making.

The decisions reportedly made fell into clearly defined middle-management roles and functions. The approaches taken in making those varied decisions ranged from descriptions of a classical conception of decision-making, such as in the models of Weber (1947), Harrison (1975), Janis & Mann (1977), and O'Reilly (1982), to 'ad hoc' value judgements based on experience of less formalised approaches.

All respondents indicated a conscious and personal style in decision-making as well as placing some value on the actual process itself. Those respondents who adopted either the formal information gathering model of classical decision theories or who stated a process of group communication and negotiation gave clear personal accounts of the effectiveness of their decisions made. The respondents who gave less succinct or less elaborate examples of recent decisions made, thereby, gave less qualitative judgements of the potential effectiveness of their decisions. This interpretation was derived from respondents' answers to the two interview questions (Questions 10 and 11) and the background information given for their organizational documentation provided in response to the last question (Question 12).



## 5.12 COMMENT ON THE SIGNIFICANCE OF THE ORGANISATIONAL DOCUMENTATION

Clearly, all respondents identified significant factors promoting or obstructing information usage which affected the quality of decisions made. They were higher-level policy-making forces, external forces such as industry and training authorities or school-based factors, or the more fundamental and motivational factors such as position, organisational climate, access to information or the constraints of time.

However, the information influencing the decisions was considered as important as the decisions themselves, and the quality of the decisions made. The three clearest examples of this concern were exhibited by respondents through the organisational documentation provided: an occupational needs analysis report and two central policy directions from the Education Department.

## CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

### 6.1 CONCLUSIONS

Findings concerning sources and types of information selected were consistent between both questionnaire and interview responses as well as confirming of previous studies on information usage. Several sources were often consulted, but the sources mentioned most frequently represented direct interpersonal communications from discussion and contact with colleagues. Thus ideas resulting from discussion were the preferred sources.

The two other information sources found to be most useful were curriculum documentation and professional journals. Sources with the lowest rankings were computer-based information retrieval services and external libraries.

Two related and significant conclusions were the following. There was an expressed need for surveillance of the information sources in anticipation of information needs. Also there was criticism of the lack of accessibility, timeliness, up-to-dateness, relevance and usefulness of the professional journals - a source obtained from the departmental libraries. These findings can be linked to the identification of the most important characteristics of information sources. They were relevance, accessibility, up-to-dateness, ease of use and informativeness regarding new developments.

Equally significant were some factors related to the constraints of time and the unavailability of trained people to access the relevant sources. The implication was that these factors inhibited the selection of appropriate information

sources.

The greatest difficulties in using information were expressed in terms of the lack of time, getting information promptly, and locating up-to-date or suitable material. Cost and professional assistance were not significant factors.

Individual characteristics such as position held and length of experience were insignificant factors. Predictably, with half the sample holding senior positions with lengthy personal experience in this middle management level, they were identified as factors enhancing information use, and were negligible factors in obstructing information usage.

There were clearer findings from the very polarised views about the organisational characteristics, and the effect of the work environment on information use. Open work climates incorporating high levels of professional autonomy positively enhanced tasks performed. Closed systems inhibited information use, particularly information dissemination. The main implication of this was that investment of time in information use was very sensitive to the organisational climate.

Access to libraries and information serves to significantly enhance information usage. This finding can be linked with two sets of factors. First, those factors identified as the lack of time and unavailability of trained personnel to assist in the location of valued information sources. Secondly, those factors identified as the constraints of time and ready accessibility to up-to-date information which obstructed information use.

The present study provided a description of a relationship between information use and curriculum

decision-making. However, there was great diversity in the use of information for decision-making by the curriculum officers. Access to library and information services enhanced information use, but they did not meet specific needs for information use in effective curriculum decision-making. Much of the information that was sought was treated in the surveillance mode rather than the decision mode.

There were two key factors which contributed to the effectiveness of curriculum decision-making. One was the value placed on the process of decision-making itself, particularly the processing of the information. The other factor was the group or interpersonal communication and negotiation as part of that process of decision-making. The information influencing the decisions was as important in ensuring effectiveness as the decisions themselves, or the quality of decisions made.

## 6.2 RECOMMENDATIONS

The weight of the evidence in the present study is that information use is symbolic of a commitment to organisational or personal efficiency in making a decision. Yet it would be both impracticable and unreasonable to propose that curriculum officers as decision-makers, at this middle management level, devote more time to processing the information available. It would require a considerable commitment of time and effort. A significant finding of the present study was the often expressed lack of time to use the information, as well as criticism of the accessibility, timeliness, relevance and up-to-dateness of the information sources obtained from the library services.

Further, the relative importance placed on interpersonal communication and networks of information sources indicates the

need for a shift in the basic conception of the role of library and information services. That means a shift from access to information sources to the provision of an information service to meet the identified needs of individual personnel. The information service needs to be an organised system of current awareness services, based on the "selective dissemination of information" (SDI) service being provided already by some educational libraries as a "value added" commodity.

Therefore, as information processing represents one possible input to effective curriculum decision-making, it is recommended that the departmental libraries establish guidelines for the provision of SDI services, tailored to the specific needs of curriculum officers and provided by trained professional library personnel. Important elements in such an organised system would be the precise construction and regular refinement or updating of officers' individual interest profiles of their information needs, monitoring the pertinent literature; selecting and disseminating the relevant documentation; ensuring efficient document delivery; and finally, introducing and publicising the up-to-date information data base services available through computerised searching facilities.

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APPENDIX A: CORRESPONDENCE

11th November 1987

Mr K. Axton  
Director-General  
Education Department of Tasmania  
116 Bathurst Street  
HOBART  
Tasmania 7001

Dear Sir,

Subject: Application for approval to  
conduct a questionnaire survey

I seek your approval to use the accompanying questionnaire in a survey of curriculum officers within the Curriculum Services branches of both the Division of Educational Programs and the Division of TAFE. The work, is part of my study towards the M.Ed. degree at the University of Tasmania. The supervisor for the dissertation is Dr W. Ramsay.

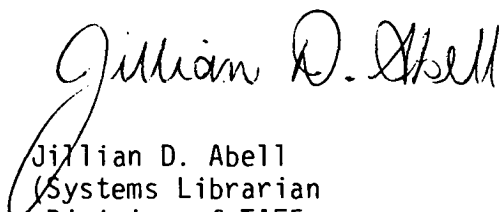
My intention is to investigate factors contributing to the use of information for curriculum decision-making within the Education Department's Curriculum Services. The approach is a case study involving the survey questionnaire followed by interviews of interested respondents.

The purpose of this study is to identify which factors, e.g. information support systems or library-based reference and information services assist effective decision-making processes below senior management levels, such as in curriculum management. It is hoped that such a study could assist the planning of new services or tailoring existing services to meet expressed needs.

The preferred time-schedule for conducting the survey would be November. Following approval in principle, the approach would involve contacting the respective Superintendents on matters of procedure.

Your sympathetic approval of this application is requested.

Yours sincerely,

  
Jillian D. Abell  
(Systems Librarian  
Division of TAFE,  
Education Department  
73 Murray Street)  
Phone 307118

23rd November, 1987

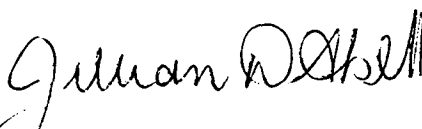
Dear

As part of a dissertation study at the University of Tasmania, I am investigating factors contributing to information use in curriculum decision-making. This questionnaire survey, followed up by a small number of interviews of interested participants focuses on the Curriculum Services branches of both the Division of Educational Programs and the Division of TAFE.

It is anticipated that the survey could help extrapolate guidelines for use in the planning of future information services.

I would be most appreciative if you could complete the accompanying questionnaire. It should take only a few minutes of your time. I will arrange for the questionnaire to be collected at a mutually convenient time. Anonymity is ensured. Also, the findings will be made available to those taking part. Thanking you, in anticipation of your help.

Yours sincerely,



Jillian D. Abell  
(Systems Librarian,  
Division of TAFE,  
Education Department  
73 Murray Street)  
Phone 307118

APPENDIX B: QUESTIONNAIRE

FACTORS PROMOTING INFORMATION PROCESSING  
AND DISSEMINATION IN EFFECTIVE  
CURRICULUM DECISION-MAKING

Thank you for agreeing to take part in this survey. The questionnaire has been made as short and as straightforward as possible. The term, 'information' is used in its broadest sense, and the phrase, 'curriculum decision-making' refers to any decisions made at any level regarding curriculum management.

Most of the questions require you only to tick an appropriate box or column from a list of available choices.

Please complete all questions.

Background

- 1. Your current position: .....
  
- 2. Number of years experience:  
(Please indicate the number of years in the squares)  
  
In current position .....  
In other areas:  

educational .....  
                  industrial .....  
other professional .....

### Section I: Information Sources

1. Please indicate how often you seek the following sources of information. (Tick one of the available choices for each item.)

Sources of information	How Often Sought			
	Never	Seldom	Sometimes	Often
Ideas resulting from discussion with colleagues or supervisors				
Notes, files, or correspondence in office				
Books, handbooks or administrative guidelines				
Curriculum documents or statements				
Professional journals				
Workshops, seminars, course of study and committee meetings, etc.				
Outside experts, consultants, employer groups, clients or government agencies				
Inter-departmental contact with colleagues in other units				
Departmental libraries				
External libraries, e.g. public, academic, special or government				
Research reports, theses, dissertations				
Abstracting, indexing, bibliographic or documentation services				
Computerised information retrieval from data base services, e.g. ERIC				
Other sources? (Please list if any)				
_____				
_____				
_____				

2. Please select the three sources from the above list which you find most useful in your work. Rank these in order of usefulness to you.

<u>Source</u>	<u>Rank</u>
.....	1.
.....	2.
.....	3.

3. Which factors significantly affect your use of the information sources? Please tick those which affect your use of sources.

Isolation	<input type="checkbox"/>
Accessibility	<input type="checkbox"/>
Work environment	<input type="checkbox"/>
Other (please list)	<input type="checkbox"/>

.....

.....

4. Please indicate how important each of the following characteristics of information sources are to you. (Please tick one of the available choices for each item).

Importance	How Important			
	Not Important	Of Little Importance	Important	Very Important
Close at hand, and usually accessible				
Ease of use				
Accuracy, reliability, relevance, specificity and authoritativeness				
Presentation of a range of view-points				
Gives leads to other sources				
Timely and responsive to a need				
Keeps you informed of new developments				
Free, or inexpensive to acquire				
Completeness, up-to-datenes and comprehensiveness				
Other: (Please list if any)				
.....				
.....				
.....				

## Section II: Information Use

1. Please indicate the degree of difficulty in finding and using information. (Tick one of the available choices for each item.)

Degree of difficulty	Not Difficult	Moderately Difficult	Very Difficult	Very Difficult
Finding time to seek information				
Getting information promptly				
Getting most up-to-date material available				
Locating useful or suitable sources				
Analysing report findings or research statistics				
Financial costs and budget restrictions				
Lack of professional assistance to locate information				
Disseminating the information for use by others				
Evaluating competing sources of information				
Knowing how to obtain access to information retrieval services, e.g. computerised data base services, such as ERIC				

2. Please indicate how often you need to provide and disseminate information to others, e.g. colleagues, teachers, project participants, or other audiences. (Tick the appropriate box).

Rarely	<input type="checkbox"/>
Fairly often	<input type="checkbox"/>
Regularly	<input type="checkbox"/>
Very Often	<input type="checkbox"/>

3. Are there any factors which significantly enhance your use (e.g. acquisition, processing or dissemination) of information for making effective decisions? (Please tick the appropriate boxes).

Open organisational climate	<input type="checkbox"/>
Access to libraries and information services	<input type="checkbox"/>
Position	<input type="checkbox"/>
Experience	<input type="checkbox"/>
Others (please specify)	<input type="checkbox"/>

.....

.....

.....

4. Are there any factors which significantly obstruct your use (e.g. acquisition, processing or dissemination) of information for making effective decisions? (Please tick the appropriate boxes.)

Closed organisational climate	<input type="checkbox"/>
Isolation from libraries and information services	<input type="checkbox"/>
Position	<input type="checkbox"/>
Experience	<input type="checkbox"/>
Others (please specify)	<input type="checkbox"/>

.....

.....

.....

Thank you very much for completing this questionnaire.

If you would be willing to follow up this questionnaire response with a short interview, please add your name.

Name: .....



## APPENDIX C: INTERVIEW SCHEDULE

### SUMMARY

Twelve curriculum officers from both the Division of TAFE and the Division of Educational Programs of the Education Department of Tasmania were interviewed in sessions lasting approximately half an hour. They had indicated at the end of the questionnaire that they were prepared to take part in this follow up meeting.

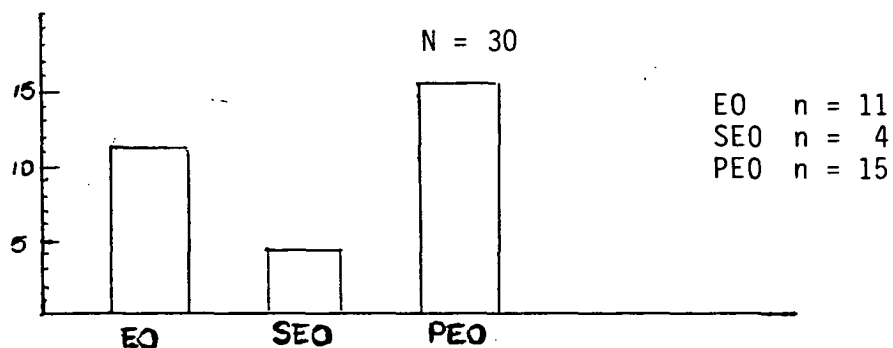
### SCHEDULE

1. What kinds of information do you need in your work?
2. What sources of information do you use? (Any other?)
3. Which are the most useful?
4. Have you made any specific enquiry for information lately? What was the reason?
5. How would you describe your work environment?
6. Broadly speaking, is it open or closed, autonomous or controlled?
7. Does this kind of work and/or climate affect your use of the information - how it is acquired, which sources are consulted or how it is used and disseminated?
8. What are the most important and/or successful decisions you often make in your position?
9. What sort of approach do you take in making a decision?
10. What sort of information is available to you, and is necessary to make a decision?
11. Can you give details of a recent example?
12. Is there any documentation providing illustration?

APPENDIX D: SAMPLE OF RESPONDENTS BY POSITION  
AND EXPERIENCE

Table 1

Sample of respondents by position



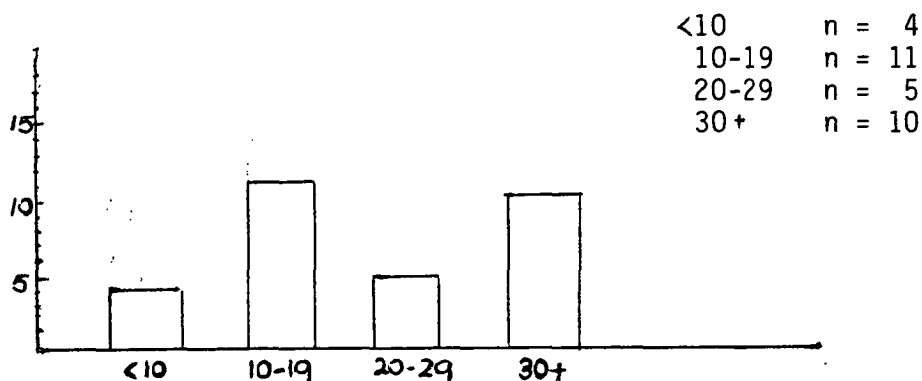
Note: Positions indicated as

EO = Education Officer/Technical Education Officer  
 SEO = Senior Education Officer/Senior Technical Education Officer  
 PEO = Principal Education Officer/Principal Technical Education Officer

Table II

Sample of respondents by length of experience

N = 30



Note: Total number of years experience in current, education, professional and other positions.

## APPENDIX E: LIST OF ORGANISATIONAL DOCUMENTATION

Copies of organisational documentation provided during interviews as examples of sorts of information necessary to make a decision:

### Organisational charts

1. Basic learning in Primary Schools Program (no date)
2. Paths to an Automotive Career (no date)

### Papers

1. Kays, Malcolm (1987) "Criterion-thingummybobbed assessment." Curriculum Development and Evaluation Section.
2. Kays, Malcolm (1987) "The Tasmanian Certificate of Education." Curriculum Development and Evaluation Section. Educational Measurement Unit.
3. Divisional policy statement on Curriculum Development of TAFE courses. Draft No. 2 (no date).

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